SYLLABUS

1. Data about the program of study

1.1 Institution	The Technical University of Cluj-Napoca
1.2 Faculty	Faculty of Automation and Computer Science
1.3 Department	Computer Science
1.4 Field of study	Computer Science and Information Technology
1.5 Cycle of study	Bachelor of Science
1.6 Program of study / Qualification	Computer science / Engineer
1.7 Form of education	Full time
1.8 Subject code	43.00

2. Data about the subject

2.1 Subject name	***Practical work in the domain of study***				
2.2 Course responsible / lecturer	Assoc. prof. dr. eng. Tiberiu Mariţa - Tiberiu.Marita@cs.utcluj.ro				
2.3 Teachers in charge of seminars / laboratory / project	Internship supervisors appointed by the faculty: Lect.dr.eng. Marcel Antal, Lect.dr.eng. Itu Razvan, Assoc.prof.dr.eng. Anca Hangan, Assoc.prof.dr.eng.Camelia Lemnaru, Prof.dr.eng Adrian Groza, Assoc.prof.dr.eng. Victor Bacu, Assoc.prof.dr.eng. Tiberiu Marita				
2.4 Year of study	III	2.5 Semester	2	2.6 Type of assessment (E - exam, C - colloquium, V - verification)	V
2.7 Subject category	*DF – fundamentală, DD – în domeniu, DS – de specialitate, DC – complementară*				DD
	DI – Impusă, DOp – opțională, DFac – facultativă				DI

3. Estimated total time

3.1 Number of hours per week	15	of which:	Course	-	Seminars	-	Laboratory	-	Project	15
3.2 Number of hours per semester	90	of which:	Course	-	Seminars	-	Laboratory	-	Project	90
3.3 Individual study:										
(a) Manual, lecture material and notes, bibliography										
(b) Supplementary study in the library, online and in the field										
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays										
(d) Tutoring										
(e) Exams and tests										
(f) Other activities:										10

3.4 Total hours of individual study (suma (3.3(a)...3.3(f)))	10
3.5 Total hours per semester (3.2+3.4)	100
3.6 Number of credit points	4

4. Pre-requisites (where appropriate)

4.1 Curriculum	N/A
4.2 Competence	N/A

5. Requirements (where appropriate)

5.1. For the course	N/A
5.2. For the applications	N/A

6. Specific competence

6.1 Professional competences	**C2** Designing hardware, software and communication components (2 credits) • **C2.1** Describing the structure and functioning of computational, communication and software components and systems • **C2.2** Explaining the role, interaction and operation of hardware, software and communication components **C3** Problems solving using specific Computer Science and Computer Engineering tools (2 credits) • **C3.1** Identifying classes of problems and solving methods that are specific to computing systems • **C3.2** Using interdisciplinary knowledge, solution patterns and tools, making experiments and interpreting their results **C5** Designing, managing the lifetime cycle, integrating and ensuring the integrity of hardware, software and communication systems (2 credits) • **C5.1** Specifying the relevant criteria regarding the lifetime cycle, quality, security and computing system's interaction with the environment and human operator • **C5.2** Using interdisciplinary knowledge for adapting an information system to application domain requirements • **C5.3** Using fundamental principles and methods for security, reliability and usability assurance of computing systems • **C5.4** Adequate utilization of quality, safety and security standards in information processing
6.2 Cross competences	**CT1 -** Honorable, responsible, ethical behavior in the spirit of the law to ensure the reputation of the profession **CT2** Identifying, describing and conducting processes in the projects management field, assuming different roles inside the team and clearly and concisely describing, verbally or in writing, in Romanian and in an international language, the results from the activity field. (2 credits)

7. Discipline objective (as results from the *key competences gained*)

7.1 General objective	Application of fundamental and applied knowledge gained in the projects development within a specialized company or research team (theme set by the project manager)
7.2 Specific objectives	Acquaintance of the students with the methodologies and technologies specific to the design and implementation activities and involve the students in carrying out simple hardware / sofware / communications projects for educational purposes: - participation in training courses and activities organized by the company or the research group to which the practice is carried out - analysis and documentation - the study and familiarization with the specific design and implementation tools - designing, implementing, testing and validating some simple projects / modules with educational role

8. Contents

8.1 Lectures	Hours	Teaching methods	Notes
-			
Bibliography -			
8.2 Applications – Seminars/Laboratory/Project	Hours	Teaching methods	Notes
• study and documentation • study of methodologies and / or technologies used • implementation, testing and validation of some simple components / modules for educational purposes • documentation of the implemented components		N/A	

Bibliography
For the project development, the draft bibliography is the one recommended by the project leader from the company or by the research team at which the implementation is performed and the one resulted in the documenting phase.

Se vor preciza, după caz: tematica seminariilor, lucrările de laborator, tematica și etapele proiectului.

9. Bridging course contents with the expectations of the representatives of the community, professional associations and employers in the field

This discipline provides education and training of the students at the workplace site, with benefits for both sides. Students are familiarized with the working and professional requirements needed to work in a company, and companies have the opportunity to shape students to facilitate their employment after graduation (to reduce training expenses / training). Also it aims to increase cohesion between academia and employment in a priority area in terms of national and European level in order to improve the skills of employees and to prepare and maintain them in the labor market in a particularly dynamic and competitive domain (mainly existing competition with Eastern European countries and Asia - India and China).

10. Evaluation

Activity type	Assessment criteria	Assessment methods	Weight in the final grade
Course	N/A	N/A	N/A
Project	Attendance (min 100 h), activity, tutor assessment	Oral colloquy. In the case that the face to face examination is not possible, the colloquy will be organized using specific e-learning platforms (MS Teams, Moodle)	100%
Minimum standard of performance: Development of a hardware / software / communication engineering project.			

Date of filling in: 07.06.2024	**Teachers**	**Title First name Last name**	**Signature**
	Course	Assoc.prof.dr.eng. Tiberiu Marița	
	Applications	-	

Date of approval in the department 20.02.2024	Head of department, Prof.dr.eng. Rodica Potolea
Date of approval in the Faculty Council 22.02.2024	Dean, Prof.dr.eng. Mihaela Dînșoreanu